

ANTIREFLECTIVE HARDMASK AND USES THEREOF

Abstract of the Disclosure

Antireflective hardmask compositions and techniques for the use of antireflective hardmask compositions for processing of semiconductor devices are provided. In one aspect of the invention, an antireflective hardmask layer for lithography is provided. The antireflective hardmask layer comprises a carbosilane polymer backbone comprising at least one chromophore moiety and at least one transparent moiety; and a crosslinking component. In another aspect of the invention, a method for processing a semiconductor device is provided. The method comprises the steps of: providing a material layer on a substrate; forming an antireflective hardmask layer over the material layer. The antireflective hardmask layer comprises a carbosilane polymer backbone comprising at least one chromophore moiety and at least one transparent moiety; and a crosslinking component.